

**REMARKS**

Claims 1-12 are pending in this application. The rejections under Section 103(a) are respectfully traversed without amendment.

**Claim Rejections under 35 USC 103**

Claims 1-12 are rejected under 35 USC 103(a) as being unpatentable over Pugh et al. (USP 6,658,423) in view of Prager (USP 5,943,670), Pugh being the base reference which is modified by applying Prager, because Pugh, not Prager, involves duplicate detection.

The Examiner's combination of Pugh and Prager would improperly render Pugh unsuitable for its intended purpose and change its principle of operation. "A proposed modification should not 'destroy a reference' by rendering the prior art invention being modified unsatisfactory for its intended purpose. *In re Gordon*, 733 F.2d 900, 902, 221 USPQ 1125, 1 127 (Fed. Cir. 1984)." Barry R.A. Weinhardt, M. Reinhart, *Obviousness Under 35 U.S.C. 103 Basic Student's Manual*, p. 24 (U.S. P.T.O. Office of Patent Policy Dissemination, Rev. 4 1998); explaining, M.P.E.P. 2143.01 and 2145, paragraph (j)(4). It is clear throughout Pugh, assigned to Google, that the problem addressed includes detecting near-duplicates "in large collections of documents ... literally billions of 'Web site' documents". Col. 1, lines 29-33; see Col. 3, lines 44-47. To be efficient enough to handle such large sets, Pugh introduces an improvement (col. 7, lines 26-29) on generating so-called fingerprints for elements or shingles of documents (col. 3, lines 24-26). In other words, Pugh found the standard fingerprinting too expensive to solve his problem, so he invented a cheaper way. One non-prior art document (attached hereto), Chowdhury et al., "Collection Statistics for Fast Duplicate Document Detection", ACM Transactions on Information Systems, Vol. 20, No. 2, at pp. 173-174 (April 2002) provides evidence that applying nearest neighbor technology is inappropriate to solving Google's problem. Referring to Salton et al. 1975, Chowdhury et al. explain in 2002, "All pairs of documents are compared, that is, each document is compared to every other document and a similarity weight is calculated. A document to document similarity comparison approach is thus

computationally prohibitive given the theoretical  $O(d^2)$  runtime, where  $d$  is the number of documents.” Applying the much more expensive  $k$  nearest neighbor computation to solve Pugh’s problem would be improper because it would render Pugh unsuitable for its intended purpose of handling sets of billions of documents. M.P.E.P. 2143.01 and 2145, paragraph (j)(4); see Barry et al., *Obviousness Under 35 U.S.C. 103*, *supra*, pp. 24-25. In addition, the modification would be improper because it would change the principle of operation emphasized by Hugh. M.P.E.P. 2143.01; see Barry et al., *Obviousness Under 35 U.S.C. 103*, *supra*, pp. 25-26.

Replacing improved fingerprinting of documents with construction of nearest neighbor lists would improperly change the Ohmura’s principle of operation by eliminating generation of fingerprints, assignment of fingerprints to lists and comparison of new fingerprints to existing lists of fingerprints. See Col. 9. “As a proposed modification or combination of the prior art should not destroy a reference, the proposed modification or combination should not change the principle of operation of the reference. *In re Ratti*, 270 F. 2d 8 10, 8 13, 123 USPQ 349, 352 (CCPA 1959). This is true even if the combination proposed is operative.” Barry et al., *Obviousness Under 35 U.S.C. 103*, *supra*, pp. 25-26; explaining, M.P.E.P. 2143.01.

Moreover, the Examiner has not offered any evidence of motivation, other than the Examiner’s intuition. It is fundamental, as indicated in MPEP § 2143.01, that the Examiner rely on some evidentiary quality suggestion to produce the claimed combination:

Obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either explicitly or implicitly in the references themselves or in the knowledge generally available to one of ordinary skill in the art. “The test for an implicit showing is what the combined teachings, knowledge of one of ordinary skill in the art, and the nature of the problem to be solved as a whole would have suggested to those of ordinary skill in the art.” *In re Kotzab*, 217 F.3d 1365, 1370, 55 USPQ2d 1313, 1317 (Fed. Cir. 2000). See also *In re Lee*, 277 F.3d 1338, 1342-44, 61 USPQ2d 1430, 1433-34 (Fed. Cir. 2002) (discussing the importance of relying on objective evidence and making specific factual findings with respect to the motivation to combine

references); *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988); *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

This section of the MPEP cites the no-longer recent case *In re Lee*, in which the Federal Circuit clarified the need for evidentiary quality support of an Examiner's factual basis for finding a teaching, suggestion or motivation in the prior art (as opposed to the Examiner's opinion), 277 F.3d at 1343-44:

As applied to the determination of patentability *vel non* when the issue is obviousness, "it is fundamental that rejections under 35 U.S.C. § 103 must be based on evidence comprehended by the language of that section." *In re Grasselli*, 713 F.2d 731, 739, 218 U.S.P.Q. (BNA) 769, 775 (Fed. Cir. 1983). ... "The factual inquiry whether to combine references must be thorough and searching." *Id.* It must be based on objective evidence of record. This precedent has been reinforced in myriad decisions, and cannot be dispensed with. [citation omitted] The need for specificity pervades this authority. *See, e.g., In re Kotzab*, 217 F.3d 1365, 1371, 55 U.S.P.Q.2D (BNA) 1313, 1317 (Fed. Cir. 2000) ("particular findings must be made as to the reason the skilled artisan, with no knowledge of the claimed invention, would have selected these components for combination in the manner claimed"); *In re Rouffet*, 149 F.3d 1350, 1359, 47 U.S.P.Q.2D (BNA) 1453, 1459 (Fed. Cir. 1998) ("even when the level of skill in the art is high, the Board must identify specifically the principle, known to one of ordinary skill, that suggests the claimed combination. In other words, the Board must explain the reasons one of ordinary skill in the art would have been motivated to select the references and to combine them to render the claimed invention obvious."); *In re Fritch*, 972 F.2d 1260, 1265, 23U.S.P.Q.2D (BNA) 1780, 1783 (Fed. Cir. 1992) (the examiner can satisfy the burden of showing obviousness of the combination "only by showing some objective teaching in the prior art or that knowledge generally available to one of ordinary skill in the art would lead that individual to combine the relevant teachings of the references"). ... In its decision on Lee's patent application, the Board rejected the need for "any specific hint or suggestion in a particular reference" to support the combination of the Nortrup and Thunderchopper references. Omission of a relevant factor required by precedent is both legal error and arbitrary agency action.

Under *In re Lee*, it is not enough for the Examiner to announce the apparent advantage of the claimed invention and rely on his own announcement derived from the application, in the absence of some evidentiary quality teaching or suggestion, as motivation to combine two references. No evidentiary quality support for combining

references is found in this rejection.

Going further, we tested the Examiner's intuition by looking for application of nearest neighbor technologies to problems otherwise solved with Rabin/Broder fingerprinting. We searched Lexis' utility patent database for ("knn" or "nearest neighbor") and ("shingl\*" and "fingerprint\*") (adapted to Lexis' syntax) and found ZERO HITS. That is, the sets of knn and fingerprint patents are disjoint, non-overlapping. This is objective evidence, which the Examiner must overcome, that the Examiner's intuition is mistaken.

For the several reasons set out above, reconsideration of rejected claims 1-12 is respectfully requested.

### **CONCLUSION**

Applicants respectfully submit that the claims, as stated herein, are in condition for allowance and solicit acceptance of the claims, in light of these remarks. If the Examiner disagrees and sees amendments that might facilitate allowance of the claims, a call to the undersigned would be appreciated.

Should any questions arise, the undersigned can ordinarily be reached at his office at 650-712-0340 from 8:30 to 5:30 PST, M-F and can be reached at his cell phone 415-902-6112 most other times.

Respectfully submitted,

A handwritten signature in cursive script, reading "Ernest J. Beffel, Jr.", written over a horizontal line.

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